

The NOAA GPM Proving Ground and Hydrometeorology Testbed Southeast Pilot Study

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To accelerate the use of anticipated satellite products, NOAA established the GOES-R Proving Ground (PG) program to prepare NOAA operational forecasters for emerging products soon after satellite launch, as well as to leverage off of the R2O and O2R created through this program. The Joint Polar Satellite System (JPSS) Proving Ground, although still in an earlier phase, is a similar concept for JPSS data and products. In parallel to the PG concept, NOAA also developed testbeds at many of its National Weather Service (NWS) Centers for Environmental Prediction as well as within NOAA research, to accelerate the use of new technologies (i.e., radars, profilers, etc.), models and data sets for real-time prediction (<http://www.testbeds.noaa.gov/>). It is the purpose of this presentation to describe the synergy of these two concepts as it relates to the Global Precipitation Measurement Mission (GPM) and other emerging precipitation products from both GOES-R and JPSS.

One of the top recommendations from the 2nd NOAA User Workshop on GPM was the establishment of a GPM PG, aimed at fostering infusion of NASA GPM data and products into NOAA operations. The NOAA GPM PG is being designed to test new algorithms and products, evaluate product performance and facilitate exchange of GPM products within NOAA. The PG infrastructure will consist of ground-based instrumentation (profilers, rain gauges, disdrometers, etc.), computer networks, and NOAA personnel. It is envisioned that the PG will combine resources across NOAA Line Offices (NWS, NESDIS, and OAR) and leverage off of NOAA’s testbed infrastructure, including the HMT and its upcoming SE Pilot Study (HMT-SEPS). This infrastructure provides an opportunity to extend the evaluation activities in other testbeds/PGs. For example, the QPE algorithm developed for the Advanced Baseline Instrument (ABI) on GOES-R will be tested in the western N.C. region. Moreover, as part of the integration of JPSS passive microwave data into CMORPH, HMT-SEPS data will be used for validation of the algorithm. The talk will describe in more detail some of these concepts, and will also use the opportunity of the testbed workshop to seek further coordination amongst the NOAA testbed principles.